

CLAIMS

1. A jack comprising

a cast metal base having a pair of spaced apart, unitary, rigid, substantially planar side members each with a lower edge, at least a portion of each said lower edge adapted to rest on ground during use of the jack,

each side member having a forward segment and a rear segment, the forward segments being separated by a predetermined distance and being substantially parallel, and each forward segment having a front end, a rear end, and a predetermined length, said predetermined length of each forward segment being substantially equal and said front ends being in substantial alignment and said rear ends being in substantial alignment,

a substantially horizontally oriented, cast metal platform having a forward end, a rear end, opposed sides, and an upper surface adapted to support a load in an elevated position with the entire load above ground level, said platform having a width that is substantially equal to said predetermined distance and a length that is substantially equal to said predetermined length,

a pair of support arms each connected between one side member and the platform, each support arm having one end pivotably connected to the forward end of the platform and another end pivotably connected to an intermediary portion of a forward segment of the side member to which said support arm is connected,

a cast metal lift arm having a forward end pivotably connected to the rear end of the platform at a central portion thereof and a rear end pivotably mounted between the rear segments of the side members, and

a driver assembly mounted to the base between the rear segments of the side members, said driver assembly including a hydraulic cylinder having ram element coupled to the lift arm, said ram element in response to manual actuation moving substantially horizontal causing the platform to move between a lowered position and a plurality of different elevated positions, said support arms and lift arm moving in unison and substantially parallel to each other so said platform maintains a substantially horizontal orientation as the platform moves between lowered and elevated positions.

2. The jack of Claim 1 where said load has a maximum weight of 2500 pounds.

3. The jack of Claim 1 including a detachable, elongated safety stop member that is manually detached and, when in an elevated position, is located so that at least a portion thereof engages a top edge of the base if the platform abruptly returns to the lowered position.

4. The jack of Claim 1 including an axle that extends between the forward ends of the forward segments, said axle carrying a pair of wheels.

5. The jack of Claim 4 where at least one of the wheels lie outboard of one side member.

6. The jack of Claim 1 including a wheel attached to the rear segment of each side member,

7. The jack of Claim 1 where the rear segments lie inward from the

forward segments.

8. The jack of Claim 1 including a detachable handle for actuating the driver assembly.

9. The jack of Claim 1 where the base includes cast metal wheel mounts that are detachably connected to the rear segments of the base.

10. The jack of Claim 1 where each rear segment includes a cast metal wheel mount that is integral therewith.

11. The jack of Claim 1 where said lift arm is coupled to the driver assembly through at least one link connected to the rear end of the lift arm.

13. A jack comprising

a pair of spaced apart, unitary side members, each side member having a forward segment, an intermediate segment, and a rear segment,

the forward segments being substantially parallel, separated by a first predetermined distance, and in substantial registration,

the rear segments being substantially parallel, separated by a second predetermined distance that is less than said first predetermined distance, and in substantial registration, and

the intermediate segments slanting inward towards each other to connect the forward segment and rear segment of each side member,

a substantially horizontally oriented platform that is mounted above the side members to move between a lowered position and a plurality of elevated positions,

a pair of support arms, each support arm having one end pivotably connected the platform and an opposed end pivotably connected to one of the forward segments of the side members, and

a manually actuated driver assembly connected to a lift arm that is positioned lengthwise along a longitudinal axis of the jack, said lift arm having one end pivotably connected to the platform and an opposed end pivotably connected between the rear segments of the side members,

said lift arm in response to the actuation of the driver assembly moving the platform between lowered and elevated positions, with said platform being maintained by said support arms and said lift arm in a horizontal orientation as said platform moves between lowered and elevated positions.

14. The jack of Claim 13 where the platform has a substantially rectangular-shaped configuration.

15. The jack of Claim 15 where the platform includes a marginal frame with a hollow interior.

16. The jack of Claim 13 where the side members, platform, and lift arm are made from cast aluminum.

17. The jack of Claim 13 where the driver assembly includes a fluid reservoir, a pair of caps at opposed side of the reservoir, a hydraulic cylinder having ram element coupled to the lift arm and in communication with the fluid reservoir, said ram element in response to being actuated moving the lift arm so the platform is moved between lowered and elevated positions, one cap being coupled the

rear segment of one of the side member and the other cap being coupled the rear segment of the other of the side member.

18. The jack of Claim 17 where the one cap fits within an opening in the rear segment of said one side member and the other cap fits within an opening in the rear segment of said other side member.

19. The jack of Claim 13 where a brace extends between each intermediate segment and rear segment of each side member.

20. The jack of Claim 13 where a first stiffening element extends between front ends of each of said forward segments and a second stiffening element extends between rear ends of each of said forward segments near a junction between the forward segments and the intermediate segments.

21. A jack comprising

a pair of spaced apart side members with at least portions of lower edges thereof resting on ground during use of the jack,

each side member including a forward segment and a rear segment, the forward and rear segments of the side members being substantially parallel, with the rear segments being closer to each other than the forward segments,

at least one stiffening element extending between the side members, and

a substantially horizontally oriented platform having a substantially rectangular-shape with front corners and rear corners, said platform being mounted above the side members to move between a lowered position and a plurality of elevated positions,

a pair of support arms each connected between one side member and the platform, one support arm having a first end pivotably connected at or near one front corner of the platform and a second end pivotably connected to the forward segment of one side member and the other support arm having a first end pivotably connected at or near the other front corner of the platform and a second end pivotably connected to the forward segment of the other side member,

a manually actuated driver assembly connected to a lift arm that is positioned lengthwise along a longitudinal axis of the jack, said lift arm having one end pivotably connected to the platform between the rear corners and an opposed end pivotably connected between the rear segments of the side members,

said lift arm in response to the actuation of the driver assembly moving the platform between lowered and elevated positions, with said platform being maintained by said support arms and said lift arm in a horizontal orientation as said platform moves between lowered and elevated positions.

22. A jack comprising

a pair of spaced apart rigid, substantially planar side members with at least portion of lower edges thereof adapted to rest on the ground during use of the jack,

each side member having a bend therein to form a forward segment and a rear segment, said forward segments being substantially parallel to each other and said rear ends being substantial parallel to each other, said forward segments separated by a predetermined distance and having predetermined equal lengths,

a substantially horizontally oriented platform having a forward end, a rear end, opposed sides, and an upper surface adapted to

support a load in an elevated position with the entire load above ground level, said platform having a width that is substantially equal to said predetermined distance and a length that is substantially equal to said predetermined lengths,

a pair of support arms each connected between one side member and the platform, each support arm having one end pivotably connected to the forward end of the platform and another end pivotably connected to the forward segment of the side member to which said support arm is connected,

a lift arm having a forward end pivotably connected to the rear end of the platform at a central portion thereof and a rear end pivotably mounted between the rear segments of the side members,

a driver assembly mounted to the rear segment of the base between the rear segments of the side members, said driver assembly in response to manual actuation moving said support arms and lift arm substantially in parallel so said platform maintains a substantially horizontal orientation as it moves between lowered and elevated positions,

23. A jack comprising

a cast aluminum base having a pair of spaced apart, unitary side members, each side member having a forward segment and a rear segment, the forward segments being separated by a predetermined distance at forward ends thereof, said forward segments being substantially parallel and each having a predetermined length, said predetermined lengths being substantially equal,

a substantially horizontally oriented, cast aluminum platform having a forward end, a rear end and an upper surface adapted to support a load in an elevated position with the entire load above

ground level, said platform having a width that is substantially equal to said predetermined distance and a length that is substantially equal to said predetermined length,

a pair of support arms each connected between one side member and the platform, each support arm having one end pivotably connected to the forward end of the platform and another end pivotably connected to the forward segment of the side member to which said support arm is connected,

a cast aluminum lift arm having a forward end pivotably connected to the rear end of the platform at a central portion thereof and a rear end having a first section pivotably connected to one side member at the rear segment thereof and a second section pivotably connected to the other side member at the rear segment thereof,

a driver assembly mounted to the rear segment of the base between the side members, said driver assembly including a hydraulic cylinder having ram element coupled to the lift member, said ram element in response to manual actuation moving substantially horizontal causing the platform to move between lowered elevated positions.

24. A jack comprising

a base having a pair of spaced apart, unitary side members, each side member having a forward segment, an intermediate segment, and a rear segment, said rear segments being separated by a predetermined distance,

said forward segments having at least one stiffening element extending between them and a brace member abutting an outer side of each said intermediate segment,

a substantially horizontally oriented, platform overlying and

being disposed between the side members,

a pair of support arms, each support arm having one end pivotably connected to the platform and another end pivotably connected to one of the side members,

a unitary lift arm having a forward end pivotably connected to the platform and a rear end pivotably connected between the rear segments, said rear end of the lift arm having a width that is substantially equal to said predetermined distance separating said rear segments, and

a driver assembly mounted to the rear segments that upon actuation moves the platform between a lowered position and a plurality of different elevated positions, platform maintaining a substantially horizontal orientation as said platform moves between lowered and elevated positions.

25. A jack comprising

a base having a pair of spaced apart, unitary, side members that are substantially mirror images of each other, each side member having a forward segment, an intermediate segment, and a rear segment, the forward segments being separated by a first predetermined distance, said rear segments being separated by a second predetermined distance that is less than said first predetermined distance, and said intermediate segments slanting inward towards each other to connect said forward segments and rear segments, said forward segments being in substantial registration and defining a substantially rectangular space having predetermined dimensions,

a substantially horizontally oriented, unitary platform having a substantially rectangular shape with dimensions that are slightly less

than the dimensions of said rectangular space,

a pair of support arms, each support arm having one end pivotably connected to the platform and another end pivotably connected to one of the side members,

a unitary lift arm having a forward end pivotably connected to the platform and a rear end pivotably connected to the rear segments of the side members, said lift arm being positioned lengthwise along a longitudinal axis of the jack,

a driver assembly mounted to the rear segment of the base between the side members that in response to manual actuation moves the platform between a lowered and a plurality elevated positions while maintaining the substantial orientation of the platform.

26. The jack of Claim 25 where said substantially rectangular space has a length from _ to _ inches and a length from _ to _ inches.

27. The jack of Claim 25 where said base has an length of from _ to _ inches and the forward segments comprise at least ____ percent of the length of the base and the rear segments comprise at least ____ percent of the length of the base.

28. The jack of Claim 25 where said side members, platform and lift arm comprise cast aluminum.

29. The jack of Claim 25 where said platform includes a marginal frame with a hollow interior.

30. A jack including
a base having a pair of spaced apart substantially planar side

members in registration, said base having a front portion and a rear portion narrower than the front portion,

a substantially horizontally oriented, substantially rectangular platform overlying a front portion of the base and substantially covering the entire front portion,

a pair of support arms each having one end pivotably connect the platform and another end connected to one of the side members,

a lift arm having one end pivotably connected to the platform and another end connected to the rear portion of the base, said lift arm being positioned lengthwise along a longitudinal axis of the jack, and

a driver assembly mounted to a rear portion of the base that in response to manual actuation moves the platform between a lowered and a plurality elevated positions,

said support arms and lift arm moving in parallel upon actuation of the drive assembly to maintain the platform horizontally oriented.